Keep That Data Coming

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"Using 50K markers without ultrasound data is like making mashed potatoes without heat," says Willie Altenburg. As Associate Vice President of Beef Marketing for Genex CRI, and as a beef cattle breeder (Altenburg is owner/operator of Altenburg Super Baldy Ranch in Ft. Collins, Colorado), Altenburg depends on EPDs to make sound genetic selections. "So much of this business happens so fast, within a short season," he says, "that you have to look at all the tools when making mating selections. And EPDs drive the whole thing."

Those Expected Progeny Differences now include genomic data for some breeds. DNA markers, like the 50K panel, provide further insight into an animal's breeding potential, but that doesn't mean ultrasound data isn't still needed.

"That's what gives us a good, solid data base," says Craig Huffhines, Executive Vice President of the American Hereford Association. "You can layer the DNA information over the top to enhance it, and the two will work together, but you can't have DNA markers without ultrasound data."

The American Hereford Association (AHA) now uses genomically-enhanced EPDs, but Huffhines says they are telling producers to continue "religiously" collecting ultrasound, and carcass data, to compliment genomic information. "It's required if we want to go forward in the industry.

Bryce Schumann, CEO of the American Angus Association (AAA) agrees. "Continued phenotypic data is important to the breed association and the accuracy of our EPDs," says Schumann. "Even with new selection tools, all available data is still needed. It still goes back to a lot of phenotypic data."

Genetic panels must be periodically retrained. Markers move with each new generation, and must be readjusted. The AHA just received the second retraining of its panel, which shows progress on the rib eye numbers, but Huffhines says improvement is still needed on marbling. "We need to isolate the markers to make an impact on beef quality," he says "That will require a lot more phenotypes in order to enhance the discovery of markers that will increase the accuracy of EPDs and move the breed forward."

Ultrasound data also validates the accuracy of the DNA information. "We don't yet have a perfect DNA panel," says Huffhines. "We don't know enough about the genome and the interaction of genes. DNA technology is still in its infancy."

"I don't think I'd trust a DNA panel that's not validated by a large number of phenotypes," says Altenburg. "If you said you had a high-marbling bull, and offered only the 50K panel, I would wonder what validates him to be that kind of sire. Ultrasound data, carcass data, progeny, all validate the 50K. It's because of that validation that we can trust it."

Schumann says the American Angus Association has made a huge investment in its database and EPD program: "And if all that is going to have a future, we need more phenotypes. It's the largest database of any beef cattle breed association. It's the model that has been key to keeping the cattle industry open-ended, and it still needs continued record collection. That's how we can make genetic progress. That's how we increase accuracy."

EPDs, and ultrasound, are not only important within the breed association, but within the individual herd.

"How good do you want your data to be?" says Huffhines. "You need to ultrasound bulls within a contemporary group. DNA may add additional information, but without that good solid database, you can't have accurate ratios and rankings within a herd."

"We talk to breeders everyday who want to know if they should still ultrasound," says Schumann. "We tell them they should continue to do as many tests as they can afford. Now is not the time to use less technology."

As a rancher, Altenburg not only feels the expense of data collection, but the time and effort. "We get sick of running bulls up the alley," he tells. "We test for and treat disease and genetic mutation, semen test, scan. Sometimes we're surprised they have any hair left. By the last time, they know what's coming and don't want to go. They're gentlemen about it, but they don't like it. And every time it costs us 20, 30, 40 bucks. Every time it increases the value of half of the bulls or decreases the value of half of the bulls."

"But," he adds, "it tells us what we need to know."

"You have to weigh the cost against the value of the information," adds Huffhines. "It's spending money to make better decisions, and it's by far the most cost effective way to make genetic improvements for carcass traits. More profitability and more rapid progress work together. And that requires ultrasound data, on its own and as a basis for genetic markers."

"We sure can't stop," says Altenburg, "or the 50K becomes meaningless. It only works as a predictive tool because of the data set behind it. This is a competitive business, and producers have a lot on their plate besides worrying about genetics. They need information they can trust."

Schumann agrees producers have a hard road in meeting the demands of an expanding and increasingly sophisticated market. "But people in this business are very creative," he says. "They know how to face a tough challenge and find a creative solution. They will do what it takes to make meaningful genetic progress."

That's how ultrasound, EPDs, and 50K markers came into use. The experts all agree adopting new solutions does not mean abandoning the steps that led to the advancements.

"My biggest fear as we enter the genetic world is that we will get complacent in our diligence in the collection of raw data," says Huffhines. "We're going to continue to need all the phenotypic data we can get. We're a long way from making progressive breeding decisions with DNA alone."

"There's no way to estimate what the CUP Lab and ultrasound has done for seed stock and progressing the Hereford breed forward."

Craig Huffhines, Executive VP, American Hereford Association